What is claimed is:

1.   1.   A wireless communications device for receiving and sending incoming and outgoing

2.   transmissions, said transmissions including digitally-encoded data and error-correcting coding

3.   for the digitally-encoded data, comprising:

4.   a receiver operable to receive the incoming transmissions;

5.   a transmitter operable to send the outgoing transmissions over a first transmission range;

6.   and

7.   an error-correcting coding mechanism operable to vary a level of the error-correcting

8.   coding applied to the digitally-encoded data within the outgoing transmissions, such that the first

9.   transmission range is effectively increased up to a maximum transmission range corresponding

10.   to a maximum level of error-correcting coding.

1.   2.   The wireless communications device of claim 1, wherein the error-correcting coding

2.   mechanism is additionally operable to decode varying levels of error-correcting coding applied

3.   to the incoming transmissions.

1.   3.   The wireless communications device of claim 1, wherein a first portion of the outgoing

2.   transmissions contains information to notify the second wireless communications device that a

3.   remaining portion of the outgoing transmissions have an increased level of error-correcting

4.   coding.

1.   4.   The wireless communications device of claim 3, wherein a first portion of the incoming

2.   transmissions contain information to notify the wireless communications device that a remaining

3.   portion of the incoming transmission has an increased level of error-correcting coding.

1.   5.   The wireless communications device of claim 1, wherein the error-correcting coding

2.   mechanism is activated when the receiver does not receive an anticipated incoming reply

3.   transmission from the second wireless communications device.

1   6.   The wireless communications device of claim 1, wherein the wireless communications

2   device and the second wireless communications device implement the Bluetooth specification

3   for transmitting and receiving data.

1   7.   The wireless communications device of claim 6, wherein an access code portion of

2   outgoing transmissions sent by the wireless communications device is reserved to notify the

3   second wireless communications device that the outgoing transmissions have an increased level

4   of error-correcting coding.

1   8.   The wireless communications device of claim 7, wherein the reserved access code

2   portion is a reserved dedicated inquiry access code.

1   9.   The wireless communications device of claim 8, wherein the digitally encoded data

2   comprises a digitally-encoded data packet including an access code portion, a header portion and

3   a payload portion.

1   10.   The wireless communications device of claim 9, wherein the error-correcting coding

2   mechanism is activated when the second wireless communications device is outside the first

3   transmission range, such that the data packet is re-encoded, prefixed with the reserved dedicated

4   inquiry access code and re-sent with a pre-determined increase in error-correcting coding.

1   11.   The wireless communications device of claim 10, wherein the reserved dedicated inquiry

2   access code contains information indicating a level of the pre-determined increase in error-

3   correcting coding.

1   12.   A method for sending a transmission from a wireless device, the method comprising:

2   detecting that a recipient device is outside of a transmission range of the wireless device;

3   encoding digital data to be transmitted using enhanced error-correcting coding beyond a

4   standard level of error-correcting coding;

5   notifying the recipient device that following data will contain enhanced error-correcting

6   coding; and

7   sending the encoded digital data.

1   13.   The method of claim 12, said detecting whether a recipient device is outside of a

2   transmission range of the wireless device further comprising:

3   failing to detect a reply transmission from the recipient device.

1   14.   The method of claim 12, said detecting that a recipient device is outside of a transmission

2   range of the wireless device further comprising:

3   detecting a drop in signal strength in a reply transmission from the recipient device as the

4   recipient device and the wireless device move relative to one another.

1   15.   The method of claim 12, said encoding data to be transmitted using enhanced error-

2   correcting coding beyond a standard level of error-correcting coding further comprising:

3   re-encoding previously-sent data using the enhanced error-correcting coding.

1   16.   The method of claim 15, said notifying the recipient device that following data will

2   contain enhanced error-correcting coding further comprising:

3   reserving an access code portion of the transmission for the notification of enhanced

4   error-correcting coding.

1   17.   The method of claim 16, wherein the access code portion is a dedicated inquiry access

2   code portion.

1   18.   The method of claim 17, said notifying the recipient device that following data will

2   contain enhanced error-correcting coding further comprising:

3   prefixing the re-encoded previously-sent data with the reserved dedicated inquiry access

4   code portion.

1   19.   The method of claim 12, said detecting that a recipient device is outside of a transmission

2   range of the wireless device further comprising:

3   searching for a third wireless device that is available to serve as a forwarding device for

4   forwarding the transmission from the wireless device to the recipient wireless device.

1   20.   The method of claim 12, further comprising:

2   searching for a second device operable to continue receiving communications from the

3   recipient device; and

4   transferring communications from the recipient device to the second device.

1   21.   An article of manufacture, which comprises a computer readable medium having stored

2   therein a computer program carrying out a method for sending a transmission from a wireless

3   device, the computer program comprising:

4   a first code segment for encoding, in response to an indication that a recipient device has

5   been detected to be outside of a transmission range of the wireless device, a message using

6   enhanced error-correcting coding beyond a predefined standard level of encoding, to thereby

7   effectively increase the transmission range of the wireless device; and

8   a second code segment for generating a notification for transmission to the recipient

9   device that the message will contain enhanced error-correcting coding.

1   22.   The article of manufacture of claim 21, wherein the message is a data packet comprising

2   an access code portion, a header portion and a payload portion.

1   23.   The article of manufacture of claim 22, wherein a dedicated inquiry access code portion

2   is appended to a beginning portion of the access code portion.

1   24.   The article of manufacture of claim 23, wherein the dedicated inquiry access code portion

2   contains the notification generated by the second code segment.

1   25.   The article of manufacture of claim 24, wherein a user of the wireless device is notified

2   of a use of the first and second code segments during their operation.

1 26. The article of manufacture of claim 21, wherein the wireless device, including the first

2 and second code segments, operate according to the Bluetooth specification.

1 27. A method for extending a transmission range of a wireless device, the method

2 comprising:

3   encoding data using a first error correction code when the wireless device is within a first

4 transmission range of a recipient device;

5   detecting that the wireless device is outside said first transmission range; and

6   encoding messages using a second error correction code when the wireless device is

7 outside said first transmission range.

1 28. The method of claim 27, wherein said second error correction code provides greater error

2 correction capacity than said first error correction code.

1 29. The method of claim 27, wherein the wireless device implements the Bluetooth

2 specification, and further wherein a dedicated inquiry access code portion of transmitted data is

3 reserved to identify the recipient device and notify the recipient device of the second error

4 correction code when it is utilized by the wireless device.

1 30. A wireless communications system, comprising:

2   a first wireless device having a first transmission range and a first error-correcting coding

3 means; and

4   a second wireless device having a second transmission range,

5   wherein, when the first wireless device moves outside of the first transmission range

6 relative to the second wireless device, the first error-correcting coding means increases the first

7 transmission range by increasing the level of error-correcting coding applied to transmissions

8 sent from the first wireless device to the second wireless device.

1 31. The wireless communications system of claim 30, wherein at least some transmissions

2 within the system are sent and received according to the Bluetooth specification.

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1 32. The wireless communications system of claim 31, wherein a user of the first wireless

2 device is notified of the increased level of error-correcting coding, whereby the user may choose

3 to end the transmission using the increased level of error-correcting coding or move back into the

4 first transmission range.

1 33. The wireless communications system of claim 31, wherein the wireless communications

2 device and the second wireless communications device are part of a wireless network of

3 communications devices, at least some of which are portable, and further wherein the increased

4 effective transmission range is temporarily utilized when the wireless communications device

5 exceeds the first transmission range, in order to maintain contact between the two wireless

6 communications devices until one of the remaining network devices can begin to forward data

7 between the two wireless communication devices.